AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application. The current status of claims 1-29 is as follows:

1. (Currently Amended). A resource allocation system for a network, the system comprising:

a traffic shaper operative to decompose a network stream into a plurality of flows, each flow representing a service or application on a network ~~down-link~~, and shape ~~network~~ traffic on said network by allocating a different bandwidth and delay to each flow; and

a policy processor operative to control said traffic shaper and dynamically allocate at least one air interface resource to at least one network device in association with at least one of said flows.

2. (Currently Amended). A system according to claim 1, wherein said policy processor is operative to retrieve information regarding a mobile user.

3. (Currently Amended). A system according to claim 2, wherein said information includes any of a user profile and a user location.

4. (Currently Amended). A system according to claim 1, wherein said policy processor is operative to retrieve information regarding said network.

5. (Currently Amended). A system according to claim 4, wherein said information includes any of an ASP profile and a measure of loading on said air interface.

6. (Currently Amended). A system according to claim 2 ~~or 5~~, wherein said policy processor is operative to issue a service quality control signal associated with any of said information to said traffic shaper.

7. (Currently Amended). A system according to claim 2 ~~or 5~~, wherein said policy processor is operative to interface with a mobile telecommunications system infrastructure and retrieve any of said information.

8. (Currently Amended). A system according to claim 1, and further comprising:

administration means for provisioning said system, defining policies for said policy processor, and monitoring system operations.

9. (Currently Amended). A system according to claim 1, wherein said network is a cellular telephone network.

10. (Currently Amended). A system according to claim 9, wherein said policy processor comprises:

a capacity and mobility analyzer operative to:

track the distribution of a plurality of mobile stations among a plurality of cells of said network; and

determine load and available resources available to said air interface; and

a core policy processor operative to budget any of bit rate, delay, duration, and amount of data for any of said cells such that said bit rate for any of said cells does not exceed a dynamic capacity which is available for data transmission in said cell.

11. (Currently Amended). A system according to claim 1, wherein said traffic shaper is intermediate a GGSN and an IP packet network.

12. (Currently Amended). A system according to claim 1, wherein said policy processor is intermediate said traffic shaper and an SGSN.

13. (New). A method for allocating resources in a network comprising:

decomposing a network stream into a plurality of flows;

shaping traffic on said network by allocating at least one resource to each flow of said plurality of flows; and

controlling said at least one allocated resource for at least one flow of said plurality of flows by dynamically adjusting said at least one allocated resource for at least one air interface that is associated with at least one network device.

14. (New). The method according to claim 13, wherein each flow of said plurality of flows represents a service or application on a network down-link.

15. (New). The method according to claim 13, wherein said network is a cellular telephone network.

16. (New). The method according to claim 13, wherein said at least one resource includes at least one of bandwidth or delay.

17. (New). The method according to claim 13, wherein said dynamically adjusting said at least one allocated resource is in accordance with policies for said network.

18. (New). An architecture for allocating resources in a network comprising:

a first component configured for decomposing a network stream into a plurality of flows;

a second component configured for shaping traffic on said network by allocating at least one resource to each flow of said plurality of flows; and

a third component configured for controlling said at least one allocated resource for at least one flow of said plurality of flows by dynamically adjusting said at least one allocated resource for at least one air interface that is associated with at least one network device.

19. (New). The architecture according to claim 18, wherein said first component and said second component are included in a traffic shaper.

20. (New). The architecture according to claim 18, wherein said third component is included in a policy processor.

21. (New). The architecture according to claim 18, wherein said network is a cellular telephone network.

22. (New). The architecture according to claim 18, wherein said at least one resource includes at least one of bandwidth or delay.

23. (New). The architecture according to claim 18, additionally comprising, a fourth component configured for provisioning said network, defining policies for said third component for controlling said at least one allocated resource, and monitoring operations of said network.

24. (New). The architecture according to claim 23, wherein said fourth component is included in an administration unit.

25. (New). A programmable storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for allocating resources in a network, said method steps selectively executed during the time when said program of instructions is executed on said machine, comprising:

decomposing a network stream into a plurality of flows;

shaping traffic on said network by allocating at least one resource to each flow of said plurality of flows; and

controlling said at least one allocated resource for at least one flow of said plurality of flows by dynamically adjusting said at least one allocated resource for at least one air interface that is associated with at least one network device.

26. (New). The storage device according to claim 25, wherein each flow of said plurality of flows represents a service or application on a network down-link.

27. (New). The storage device according to claim 25, wherein said network is a cellular telephone network.

28. (New). The storage device according to claim 25, wherein said at least one resource includes at least one of bandwidth or delay.

29. (New). The storage device according to claim 25, wherein said dynamically adjusting said at least one allocated resource is in accordance with policies for said network.